Application No. 10/790,166

A kit for demonstrating Archimedes' principle, comprising a tub having an overflow spout, such that when fluid reaches the overflow spout, all additional fluid added to the tub will flow out the overflow spout; and a stable boat sized to float in the tub without touching the sides of the tub. The kit may further comprise a balance beam which can balance a tub edge, wherein one end of the balance beam has an attachment mechanism for attaching a counter weight, and the other end has an attachment mechanism for attaching a sample weight, such that when the sample weight is attached, and the balance beam is balancing on the tub edge, the sample weight will be submerged in the fluid. There is also a method for using this kit to demonstrate Archimedes' principle both for the buoyancy of a floating body, and the buoyancy for objects that don't float.